## PATENT COOPERATION TREATY

# **PCT**

# Translation INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference						
DC 028-P-WO	FOR FURTHER ACTION	See Form PCT/IPEA/416				
International application No.	International filing date (day/month/year)	Priority date (day/month/year)				
PCT/CH2004/000148	15.03.2004	10.04.2003				
International Patent Classification (IPC) or nation	International Patent Classification (IPC) or national classification and IPC					
Applicant	——————————————————————————————————————					
BÜHLER DRUCKGUSS AG						
	This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.					
2. This REPORT consists of a total of	8 sheets, inc	luding this cover sheet.				
3. This report is also accompanied by Al						
a. (sent to the applicant and	to the International Bureau) a total of 2	sheets, as follows:				
sheets of the descrip	tion, claims and/or drawings which have b	een amended and are the basis for this report and/or				
sheets containing red Instructions).	ctifications authorized by this Authority (so	ee Rule 70.16 and Section 607 of the Administrative				
sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.						
i —	Bureau only) a total of (indicate type and n	number of electronic carrier(s))				
(sem to the International)		.,,				
related thereto, in computer	related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see					
Section 802 of the Administrative Instructions).						
4. This report contains indications relati	4. This report contains indications relating to the following items:					
Box No. I Basis of the	Box No. I Basis of the report					
Box No. II Priority						
	d explanations supporting such statement	,,				
Box No. VI Certain doc	Box No. VI Certain documents cited					
Box No. VII Certain defe	ects in the international application					
Box No. VIII Certain obs	Box No. VIII Certain observations on the international application					
Date of submission of the demand	Date of completion	of this report				
		•				
Name and mailing address of the IPEA/EP	Authorized officer					
Facsimile No.	Telephone No.					

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Box	No. I	Basis of the report			
1.		to the language, this report is based on the internation der this item.	nal application in the language in	which it was filed, unless otherwise	
	This report is based on translations from the original language into the following language which is the language of a translation furnished for the purposes of:				
		international search (Rule 12.3 and 23.1(b))			
		publication of the international application (Rule 12.4)	)		
		international preliminary examination (Rule 55.2 and/			
2.	receiving O	to the elements of the international application, this iffice in response to an invitation under Article 14 are ternational application as originally filed/furnished	report is based on (replacement s e referred to in this report as "o	theets which have been furnished to the riginally filed" and are not annexed to	
		scription:			
				as originally filed/furnished	
	pages			as originary medicinished	
	pages				
	pages	•	received by this Authority on		
	the cla	aims:			
	nos.			as originally filed/furnished	
	nos.*		as amended (togethe	er with any statement) under Article 19	
1	nos.*	1-14	received by this Authority on		
,	nos.*		received by this Authority on		
ļ	the dr	rawings:			
	sheets	3 1/5-5/5		as originally filed/furnished	
	sheets				
	sheets		received by this Authority on		
ļ	a sequ	uence listing and/or any related table(s) - see Supplem	ental Box Relating to Sequence I	asting.	
3.	The a	mendments have resulted in the cancellation of:			
		the description, pages			
		the claims, nos.			
		the drawings, sheets/figs			
1		the sequence listing (specify):			
Ì		any table(s) related to sequence listing (specify):			
4.	This they	report has been established as if (some of) the amend have been considered to go beyond the disclosure as fi	lments annexed to this report and led, as indicated in the Suppleme	l listed below had not been made, since ntal Box (Rule 70.2(c)).	
		the description, pages			
		the claims, nos.			
		the drawings, sheets/figs			
	$\overline{\Box}$	the sequence listing (specify):			
	$\Box$				
١.	If item 4 ar	oplies, some or all of those sheets may be marked "sup			

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Bo	Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement			
1.	Statement			
	Novelty (N)	Claims	1-14	YES
		Claims		NO
	Inventive step (IS)	Claims	1-14	YES
		Claims		NO
	Industrial applicability (IA)	Claims	1-14	YES
		Claims		NO

2. Citations and explanations (Rule 70.7)

Reference is made to the following document:

D1: PATENT ABSTRACTS OF JAPAN, Vol. 2000, No. 26, 1 July 2002 -&JP 2001 239357 A (AISIN SEIKI CO LTD), 4 September 2001 (2001-09-04)

1.)

#### Novelty:

Document D1 is considered the prior art closest to the subject matter of claim 1 and discloses a holding furnace for molten metal, more particularly for light molten metal, comprising a dosing chamber that has a sealable discharge aperture which opens out into a feed tube, via which the molten metal can be supplied in a dosed manner to the place of use and it being possible to actively seal the discharge aperture by means of a stopper rod.

The subject matter of independent claim 1 differs from the prior art in that the dosing chamber (8) with the delivery pipe (21) is rotatably and

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

tiltably mounted in the holding furnace (1).

Novelty pursuant to PCT Article 33(2) is thus established.

#### 2.)

### Inventive step:

The features which distinguish the application from the available prior art have the **effect** of making it possible to better adapt to the geometric ratios of the casting chamber to be filled and that by means of a small tilting movement it is possible to decouple the dosing unit from the casting chamber, which is subject to heavy vibration.

It is not possible for the applicant to derive the claimed device from the prior art and therefore an inventive step (PCT Article 33(3)) can be acknowledged in respect of claim 1.

#### 3.)

#### Dependent claims:

Claims 2-13 and 14\* are dependent on claim 1 and therefore likewise meet the PCT requirements for novelty and inventive step.

\* see Box VIII a.)

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	4.)
	Industrial applicability:
	Since the method and the device can be used to
	handle melts in the foundry industry, the
	invention is industrially applicable.

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Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

a.)

Contrary to PCT Rule 5.1(a)(ii), the description does not cite document D1 or indicate the relevant prior art disclosed therein.

b.)

Pursuant to PCT Rule 11.13(m), the same feature must be denoted by the same reference sign throughout the application. This requirement is not satisfied by the use of reference sign (8) (see figures 1 and 2).

c.)

Contrary to PCT Rule 5.1(a)(iii), the description is inconsistent with the claims.

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Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

The application does not meet the requirements of PCT Article 6 because claims 1-14 are unclear.

a.)

Claim 14 is not clear. As currently worded, claim 14 is an independent claim. In the light of the description, however, it can be seen that it actually concerns a holding furnace according to claims 1 to 13, with a dosing device which is characterised in that the melt conversion is isolated following the join (23) by means of a ceramic sleeve (41) which is inserted into the casting chamber inside a wear protection sleeve (42).

b.)

The use of the definite article leads the reader to assume that the feature has already been mentioned in the preceding claims. This is not, however, the case for the following features and claims, which therefore contravene PCT Article 6; see:

claim 1: the delivery pipe (21)

claim 2: the gas-tight and...drive

claim 3: the scanning electrodes

claim 4: refers, inter alia, to claim 1, which
 mentions neither scanning electrodes nor
 a bellows

claim 9: the concentric arrangement of the rotary

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Box No. VIII Certain observations on the international application

arm.

c.)

The features in claims 5, 6, 7, 11 and 12 relate to a method instead of describing clear restrictions for the device. The requirements of PCT Article 6 are therefore not satisfied.

d.)

Known features should be indicated in the preamble and new features in the characterising part. This is not the case in claim 1, which therefore contravenes PCT Article 6.